

Serial No. 10/721,738  
Amdt. Dated January 21, 2005  
Reply to Office Action of September 24, 2004

Docket No. K-0582

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A nozzle assembly of a dishwasher, comprising:  
a main nozzle having a first coupling hole defined by a lip of a first wall of the main nozzle;  
an auxiliary nozzle; having a second coupling hole defined by a lip of a first wall of the auxiliary nozzle, for coupling with said main nozzle;  
first interlocking means; having a first end and a second end; for coupling with said coupling hole of said main nozzle at the first coupling hole, by being caught in lockingly coupled to the first lip of the coupling hole of said main nozzle by the first end of the first interlocking means; and  
second interlocking means; having a first end and a second end, for coupling with said coupling hole of said auxiliary nozzle at the second coupling hole, by being caught in lockingly coupled to the second lip of the coupling hole of the auxiliary nozzle by the first end of the second interlocking means, and by having a the second end to be caught on of the second interlocking means engaged with the first end of said first interlocking means, wherein the second interlocking means is configured to be disposed in both the auxiliary nozzle and the main nozzle in an assembled configuration of the nozzle assembly.

Serial No. 10/721,738  
Amdt. Dated January 21, 2005  
Reply to Office Action of September 24, 2004

Docket No. K-0582

2. (Original) The nozzle assembly as claimed in claim 1, wherein said first and second interlocking means are each provided with a passage allowing water flow between said main and auxiliary nozzles.

3. (Original) The nozzle assembly as claimed in claim 1, wherein said first and second interlocking means are rotatably assembled with respect to each other.

4. (Original) The nozzle assembly as claimed in claim 3, wherein said first interlocking means rotates on said second interlocking means.

5. (Currently Amended) The nozzle assembly as claimed in claim 1, said first interlocking means comprising:

a ~~first~~ flange; formed on ~~a~~ ~~the~~ second end ~~of the first interlocking means~~; to abut ~~on~~ ~~an exterior surface of the first wall of~~ said main nozzle ~~at the second coupling hole~~; and  
a plurality of ~~first~~ protrusions; formed on the first end ~~of the first interlocking means~~, to be ~~caught in~~ ~~fittingly received in the lip of~~ the ~~first~~ coupling hole ~~of the main nozzle~~ when said first interlocking means is rotated by a first predetermined angle.

6. (Currently Amended) The nozzle assembly as claimed in claim 5, said first interlocking means further comprising at least one slotted stop formed between said ~~first~~ flange

Serial No. 10/721,738  
Amdt. Dated January 21, 2005  
Reply to Office Action of September 24, 2004

Docket No. K-0582

and said plurality of ~~first~~ protrusions, so that said ~~first~~ protrusions are prevented from rotating beyond a second predetermined angle when fitted into the ~~first~~ lip of the coupling hole of the main nozzle.

7. (Currently Amended) The nozzle assembly as claimed in claim 1, said second interlocking means comprising:

a plurality of ~~second~~-protrusions; formed on the first end of the second interlocking means; to be caught in ~~fittingly received in the lip of the second coupling hole of the auxiliary nozzle~~, to be caught in the second coupling hole when said second interlocking means is rotated by a first predetermined angle;

a ~~second~~-flange; formed on the second end of the second interlocking means; to be caught on seat against said first interlocking means; and

a load-bearing shaft; formed between said ~~second~~-flange and said ~~second~~ protrusions, for rotatably ~~receiving inserting in~~ said first interlocking means.

8. (Currently Amended) The nozzle assembly as claimed in claim 7, said second interlocking means further comprising a plurality of supports; formed at the second end of the second interlocking means; for providing a counteracting support with respect to an opposing inner surface of a second wall of said main nozzle, to allow said ~~second~~-flange to be caught on seat against the first end of said first interlocking means.

Serial No. 10/721,738  
Amdt. Dated January 21, 2005  
Reply to Office Action of September 24, 2004

Docket No. K-0582

9. (Currently Amended) The nozzle assembly as claimed in claim 7, said second interlocking means further comprising at least one slotted stop formed between said load-bearing shaft and said ~~second~~-protrusions, so that said ~~second~~-protrusions are prevented from rotating beyond a second predetermined angle when fitted into the ~~second~~-lip of the coupling hole of the auxiliary nozzle.

10. (New) The nozzle assembly as claimed in claim 7, said load-bearing shaft configured to be rotatably disposed in the first interlocking means.

11. (New) The nozzle assembly as claimed in claim 8, said plurality of supports configured to contact the opposing inner surface of the second wall of said main nozzle.

12. (New) The nozzle assembly as claimed in claim 5, further comprising a plurality of notches formed in the lip of the coupling hole of said main nozzle to respectively receive said protrusions.

13. (New) The nozzle assembly as claimed in claim 7, further comprising a plurality of notches formed in the lip of the coupling hole of said auxiliary nozzle to respectively receive said protrusions.

Serial No. 10/721,738  
Amdt. Dated January 21, 2005  
Reply to Office Action of September 24, 2004

Docket No. K-0582

14. (New) The nozzle assembly as claimed in claim 1, wherein a maximum outer diameter of the second interlocking means is defined by an outer diameter of the second end of the second interlocking device, and wherein the outer diameter of the second end of the second interlocking device is greater than a diameter of the coupling hole of the auxiliary nozzle, and less than a diameter of the coupling hole of the main nozzle.

15. (New) A dishwasher having the nozzle assembly of claim 1.

16. (New) An apparatus for rotatably coupling first and second spray nozzles for use in a dishwasher, comprising:

a first interlocking device having first and second opposing ends, at least one protruding portion having a thickness, d, formed at the first end, a flange formed at the second end, and a through-hole extending from the first end to the second end; and

a second interlocking device having first and second opposing ends, a shaft formed between the first and second ends, at least one protruding portion formed at the first end, a flange having a thickness, c, formed at the second end, a through-hole extending from the first end to the second end, and support members extending a distance, b, from the second end, wherein the at least one protruding portion of the first interlocking device, the flange of the second interlocking device, and the support members are configured to be disposed in the first spray nozzle by a coupling hole in the first spray nozzle.

Serial No. 10/721,738  
Amdt. Dated January 21, 2005  
Reply to Office Action of September 24, 2004

Docket No. K-0582

17. (New) The apparatus of claim 16, wherein the first spray nozzle has first and second walls that define an inner height, h, and wherein  $h = d + c + b$ .

18. (New) The apparatus of claim 16, wherein the at least one protruding portion of the second interlocking device is configured to be disposed in the second spray nozzle by a coupling hole in the second spray nozzle.

19. (New) An coupling apparatus for coupling an auxiliary nozzle to a main nozzle, comprising:

a first connector having an inner diameter and an outer diameter, comprising:  
a flange configured to abut an exterior surface of a coupling hole wall of the main nozzle;  
a protrusion configured to abut an interior surface of the coupling hole wall; and  
a seating surface adjacent the protrusion; and  
a second connector comprising:  
a protrusion configured to abut an interior surface of a coupling hole wall of the auxiliary nozzle;

Serial No. 10/721,738  
Amdt. Dated January 21, 2005  
Reply to Office Action of September 24, 2004

Docket No. K-0582

a shaft having an outer diameter that is less than the inner diameter of the first connector, and configured to be rotatably disposed in the first connector; and  
a flange for seating against the seating surface of the first connector.

20. (New) The apparatus of claim 19, wherein the second connector further comprises a plurality of supports for contacting an interior surface of a wall of the main nozzle opposing the coupling hole wall of the main nozzle.

21. (New) The apparatus of claim 19, wherein the protrusion of the first connector is configured to be inserted into a slot formed in the coupling hole wall of the main nozzle, and wherein the first connector and the protrusion are also configured to be rotated with respect to the main nozzle to affix the first connector to the main nozzle.

22. (New) The apparatus of claim 21, wherein the first connector further comprises a slotted stop that is configured to limit rotation of the first connector relative to the main nozzle.

23. (New) The apparatus of claim 21, wherein the protrusion of the second connector is configured to be inserted into a slot formed in the coupling hole wall of the auxiliary nozzle, and wherein the second connector and the protrusion are also configured to be rotated with respect to the auxiliary nozzle to affix the second connector to the main nozzle.

Serial No. 10/721,738  
Amdt. Dated January 21, 2005  
Reply to Office Action of September 24, 2004

Docket No. K-0582

24. (New) The apparatus of claim 19, wherein the protrusion of the second connector is configured to be inserted into a slot formed in the coupling hole wall of the auxiliary nozzle, and wherein the second connector and the protrusion are also configured to be rotated with respect to the auxiliary nozzle to affix the second connector to the main nozzle.

25. (New) The apparatus of claim 24, wherein the second connector further comprises a slotted stop that is configured to limit rotation of the second connector relative to the auxiliary nozzle.